Unit 17 Denmore Industrial Estate, Denmore Road, Bridge of Don, Aberdeen AB23 8JW

User Manual
QTS Lift/Test Cap

This Manual Covers the Following Part Numbers:

175-4965-HV0

OPS-4852 Rev A

Table of Contents

Revision History ii
Safety iii
1 Introduction 1
1.1 General 1
1.2 Product Identification 1
2 Technical Specification 2
3 Technical Description 3
4 Operation 3
4.1 Pre Job 3
4.2 During Job 3
4.3 Post Job 3
5 Maintenance 4
5.1 Introduction 4
5.2 Schedule 4
5.2.1 Pre & Post Job 4
5.2.2 6 Monthly 4
5.2.3 Yearly 4
5.2.4 Five Yearly 4
5.3 Safety 5
5.4 Redress Procedure 5
5.4.1 Dis-Assembly 5
5.4.2 Re-Assembly 5
5.5 Maintenance Record Sheet 6
6 Testing 7
7 Parts List and Drawings 8
8 Spares 9
8.1 Individual Items 9
8.2 Supporting Equipment 9

Table 1: Technical Data 2
Table 2: Maintenance Record 6
Table 3: Parts List 175-4965-HV0 8

Figure 1: Lift Test Cap 2
Figure 2: 175-4965-HV0 8

Revision History

Issue, Release Date	Description
Rev A, 26 Jul. 12	Initial Issue

Safety

WARNING: Trapped air requires considerable time to compress and when it is compressed is highly dangerous. It has enough stored energy to separate parts with considerable force.

All pressure equipment has a particular pressure rating and care must be taken to ensure that no item is used in a situation that may cause its working pressure to be exceeded.

All personnel involved in pressure testing must be formally trained, and wearing the appropriate PPE

The lifting eye has a safe working load of 12 tonnes and is marked accordingly

This equipment and the equipment it is attached to is heavy never position yourself below a suspended load

1 Introduction

1.1 General

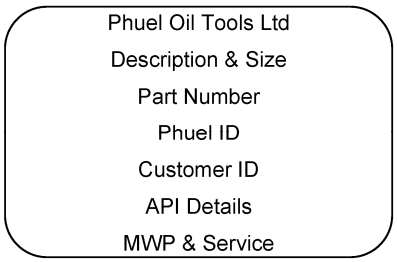
The Lift/Test cap is designed to allow the pressure testing and lifting of equipment.

This user manual serves as an introduction to the equipment and contains the relevant specifications, operation, planning and maintenance instructions, parts list and drawings.

1.2 Product Identification

Phuel products are identified by a unique serial number that facilitates full product traceability. Each product is supplied with a documentation pack that contains product certification and material/inspection reports. The serial number is always etched on the surface of the product but can sometimes be difficult to find or read after painting. A customer identification number is also included to allow the customer to track the asset in their system.

The nameplate tag is secured to the top of the Cap and is stamped with the information shown below. This tag should be located in the first instance to ensure that this manual refers to the correct equipment.



2 Technical Specification

Part Number	175-4965-HV0
Connection	9-4 ACME ½" NPT
Maximum Working Pressure (MWP)	10,000 Psi
Working Load Limit (WLL)	12 Ton
Weight	122lbs /55 kg

Table 1: Technical Data

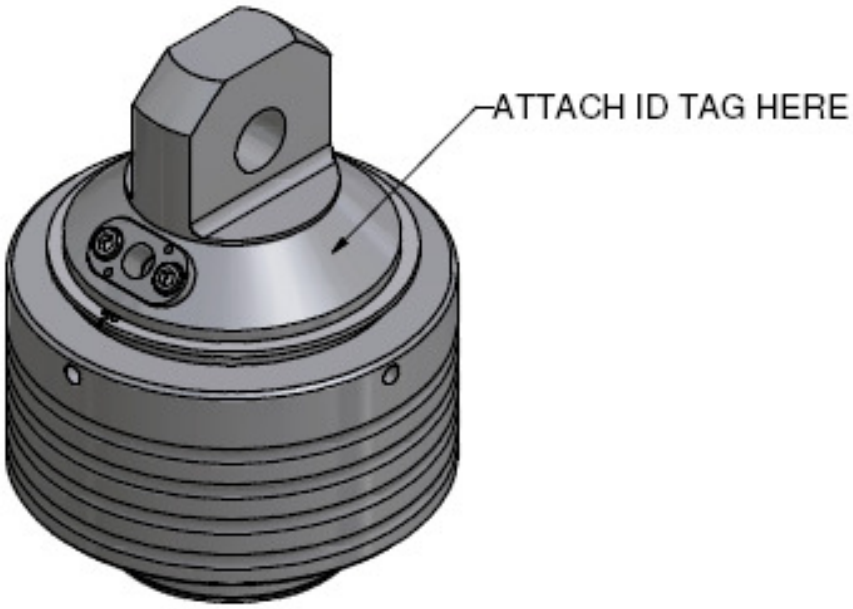


Figure 1: Lift Test Cap

3 Technical Description

The Lift/Test cap is used in conjunction with a Phuel Quick Test Sub (QTS) to allow pressure testing and lifting while the QTS is separated.

4 Operation

All operations to be carried out by suitably qualified and competent personnel

- Attach Lift/Test cap to the lower half of the QTS
- Fill equipment under test with appropriate test fluid bleeding off any air
- Test equipment using procedure laid down in appropriate user manual

4.1 Pre Job

- Check maintenance record sheet to ensure the equipment has been maintained by competent personnel
- Check all certification is in date
- Ensure equipment to be tested does not exceed the maximum working pressure or the safe working load
- Ensure Spring Seals are seated correctly and there are no signs of damage
- Ensure threads are clean
- Inspect for signs of damage/defect

4.2 During Job

- Ensure no leaks form equipment

4.3 Post Job

- Inspect for signs of damage
- Inspect Spring Seals for seating and signs of damage (replace if required with appropriate item from redress kit)
- Ensure threads are clean

5 Maintenance

All maintenance to be carried out by suitably qualified and competent personnel

5.1 Introduction

Regular maintenance of the equipment using Phuel redress kits or Phuel approved parts is essential to its continued safe operation. Ensure that the pre and post job operating procedures are followed and that maintenance records are kept.

5.2 Schedule

The maintenance schedule may be governed by international or company standards and the following is considered to be the minimum requirements.

5.2.1 Pre & Post Job

Refer to Section 4.1 and Section 4.3 for details

5.2.2 6 Monthly

- Carry out a thorough inspection of the Lift/Test Cap and Shackle reporting any signs of defect

5.2.3 Yearly

- Disassemble Lift Test Cap clean and degrease all components
- Inspect the condition of all sealing surfaces and surface coatings
- Re-coat threads and sealing surfaces if necessary. If in doubt contact Phuel Oil Tools Ltd
- Replace all elastomeric seals with items from redress kit (see spares **Error! Reference source not found.**)
- Regrease components
- Re-assemble
- Pressure test to maximum working pressure in accordance to testing procedure
- Inspect paint work and repair as necessary

5.2.4 Five Yearly

- Yearly Maintenance (plus the following)
- Remove the blanking plug
- Carry out 100% surface NDE on all surfaces
- Pressure test to test pressure witnessed by certifying authority

5.3 Safety

- Many of the components are heavy and should not be lifted without lifting aids.
- Ensure all pressure testing is carried out in the appropriate testing area by suitably qualified personnel.
- Wear appropriate personal protective equipment.
- Do not over exert yourself while using torque wrenches. Use appropriate mechanical advantages when available.
- Ensure that all tools and equipment are in good condition and are suitable for the intended use.
- Clear up any fluid spills immediately to avoid slips.

5.4 Redress Procedure

5.4.1 Dis-Assembly

- Remove circlip and remove collar
- Remove Spring Seals and discard
- Remove Saver Sub and remove ‘O’ ring and backup and discard

5.4.2 Re-Assembly

- Fit ‘O’ ring and backup to Saver Sub and refit to cap
- Fit Spring Seals to test cap
- Place collar over test cap and hold in place using circlip

5.5 Maintenance Record Sheet

Date Performed	Type of Maintenance	Performed By	Verified By	Comments

Example

Table 2: Maintenance Record

6 Testing

All testing is to be carried out in the designated test area and by suitably qualified and competent personnel.

WARNING: Trapped air requires considerable time to compress and when it is compressed is highly dangerous. It has enough stored energy to separate parts with considerable force.

- Fit appropriate test caps and blanking plugs
- Fill with testing fluid bleeding off any air within the system
- Apply a pressure of 500 psi and ensure pressure holds for a minimum of 10 minutes
- Increase pressure to Maximum Working Pressure, allow to stabilise and maintain this pressure until it is evident there are no apparent leaks. .(Testing to be carried out to Test pressure when decreed by maintenance schedule)
- Bleed off pressure, drain test fluid and dry
- Remove test caps
- Apply coating of de-watering solution to protect the bore and threads
- Fit thread protectors

On completion of all maintenance ensure the maintenance record sheet (Para 5.5) is completed

7 Parts List and Drawings

Item	Part Number	Description	Qty
1	175-4964-480	LIFT/TEST CAP BODY QTS 9.00 & 8.25 (RMEC)	1
2	125-2059-480	COLLAR SOLID 9-4	1
3	145-2176-480	SAVER SUB PORT	1
4	801-0119-V90	O-RING - B.S SIZE 119	1
5	SHC-0583-3A4	SOC HD CAP 1/2 UNC LENGTH 3/4 IN	2
6	WNL-0580-316	WASHER NORDLOCK (M12)	2
7	180-2159-STL	EXTERNAL CIRCLIP (200mm)	1

Table 3: Parts List 175-4965-HV0

Note: Thread Protector (item 100) not shown in assembly drawing

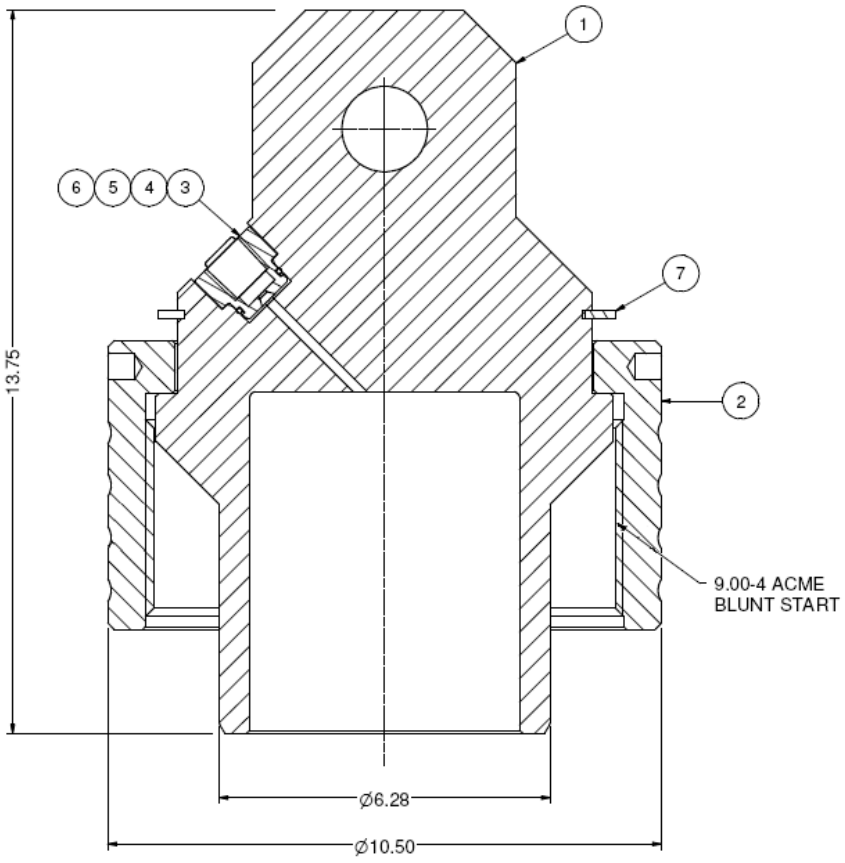


Figure 2: 175-4965-HV0

8 Spares

Use only spares supplied or approved by Phuel Oil Tools Ltd.

It is recommended that sufficient quantities of the following spares be maintained to ensure that the equipment is always available when required.

Elastomeric spares are supplied in Viton material as standard. Many other materials are available please specify when ordering.

8.1 Individual Items

Individual items may be ordered as required using the part number specified

Note: O-Rings conform to industry standards and may be substituted with those from other suppliers -– **at the sole risk of the user**.

8.2 Supporting Equipment

The lift cap is compatible with the following QTS assemblies

Part No	Description
117-3631-HV0	QTS (INSITUE) QU 9-4 BOX X 9-4 PIN/COLLAR
117-3962-HV0	QTS (INSITUE) QU 8.25 -4 BOX X 8.25-4 PIN/COLLAR

Other Phuel QTS assemblies may be compatible if the middle connection is 9-4 ACME